

Chapter 1: Background on the Regional Haze Rule

1.1 History of Regional Haze

In amendments to the Clean Air Act (CAA) in 1977, Congress added Section 169 (42 U.S.C. 7491), setting forth the following national visibility goal of restoring pristine conditions in national parks and wilderness areas:

Congress hereby declares as a national goal the preservation of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas with impairment from man-made air pollution.

Over the following years, modest steps were taken to address the visibility problems in Class I areas. Initially, the control measures taken mainly addressed plume blight from specific pollution sources. Plume blight occurs when a point source such as a smoke stack emits particulate matter or nitrogen dioxide into a stable atmosphere. These pollutants can form a thin, dark, coherent plume obscuring the view. Blight happens before the plume has been dispersed so widely that it is indistinct from the background. Both contrast and coloration may vary depending upon the plume constituents, the viewing background, the viewer angle, and the angle of the sun.¹ However, these control measures did little to address regional haze issues in the Eastern United States.

The 1990 amendments to the CAA authorized creation of visibility transport commissions and setting forth their duties, and Section 169B(f) of the CAA specifically mandated creation of the Grand Canyon Visibility Transport Commission. Following four years of research and policy development the Grand Canyon Visibility Transport Commission (Commission) submitted its report to EPA in June 1996. This report, as well as the many research reports prepared by the Commission, contributed invaluable information to EPA in its development of the Federal Regional Haze Rule.

EPA's Regional Haze Rule was adopted July 1, 1999, and went into effect on August 30, 1999. The Regional Haze Rule aimed at achieving national visibility goals by 2064. This rulemaking addressed the combined visibility effects of various pollution sources over a wide geographic region. This wide reaching pollution strategy meant that many states – even

¹ <http://www.fs.fed.us/air/source01.htm#plu>

those without Class I Areas – would be required to participate in haze reduction efforts. EPA designated five Regional Planning Organizations (RPO) to assist with the coordination and cooperation needed to address the visibility issue. Those states that make up the midsection of the contiguous United States were designated as the Central Regional Air Planning Association (CENRAP). Louisiana is associated with this RPO.

On May 24, 2002 the US Court of Appeals, DC District Court ruled on the challenge brought by the American Corn Growers Association against EPA's Regional Haze Rule of 1999. The Court remanded to EPA the Best Available Retrofit Technology (BART) provisions of the rule, and denied industry's challenge to the haze rule goals of natural visibility and no degradation requirements. EPA proposed revisions to the Regional Haze rule pursuant to the remand. The BART rule was adopted October 13, 2006 and went into effect on December 12, 2006. [To facilitate the review of this State Implementation Plan (SIP) by EPA, Federal Land Managers (FLM), stakeholders and the public, a guide is provided in 40 CFR 51.308, *Regional Haze Program Requirements*. An outline is included in Appendix J, EPA Checklist for Regional Haze SIPs.]

1.2 Breton National Wilderness Area (Class I)

The State of Louisiana has one Class I area within its borders, namely the *Breton National Wilderness Area (Breton)*. Established in 1904, Breton is the second oldest refuge in the National Wildlife Refuge System, and is comprised of a series of barrier islands including Breton Island and all of the Chandeleur Islands which are located in St. Bernard Parish, Louisiana. President Theodore Roosevelt heard about the destruction of the birds and their eggs on the barrier island chain and soon afterward awarded it Nation Wildlife Refuge status. Breton was the only national refuge that Roosevelt ever visited.²



Theodore Roosevelt, 1915 Harvard College Library

² <http://www.fws.gov/breton/>

Figure 1.1 Birdwatching on Breton

The barrier island chain was formed from the remnants of the Mississippi River's former St. Bernard Delta, which was active 2000 years ago. The size and shape of the barrier islands chain is constantly altered by tropical storms, wind, and tidal action. The total area above mean high tide was approximately 6,923 acres however; Hurricanes Katrina and Rita reduced the islands themselves from 5.64 square miles to 2 square miles.³ The refuge is approximately thirty miles off the southeast coast of Louisiana.

A portion of Breton has wilderness status and is classified as a mandatory Class I Federal area. Because of this classification, it is afforded visibility protection by the Clean Air Act (hereinafter, the CAA) as amended in 1977. Visibility is a term used to characterize the physical limitations in ambient air quality that affect visual range, contrast and coloration. Visibility limitations may be natural, such as fog and mist, or may be caused by manmade air pollution. Fog plays a major role in visibility impairment in the winter months at Breton.

Table 1-1: Class I Areas in the State of Louisiana

State	Class I Area
Louisiana	Breton National Wilderness Area

1.3 Louisiana's Visibility History

The CAA amendments of 1977, especially Section 169A, established the protection of visibility in federal Class I areas as a national goal. In 1980, the EPA established a phased regulatory approach to visibility protection. The emphasis of the first phase was to remedy existing and future impairment caused by air emissions. These visibility protection regulations established long-range goals, a planning process, implementation procedures, new source review, and a monitoring strategy for all states containing Class I federal areas. While these regulations remain unchanged, the 1990 amendments of the CAA reaffirmed the importance of visibility protection.

Louisiana submitted a Part I Visibility Plan on October 9, 1985 that was approved by EPA in the June 10, 1986 Federal Register (51 FR 20967). The Louisiana State Implementation Plan (SIP) revision, "Protection of Visibility, Proposed Part II – Long Term

³ *ibid*

Strategy,” was approved by EPA in the December 19, 1988 Federal Register (53 FR 50958). The approved SIP met the requirements of 40 CFR 51.302 and 51.306.

Louisiana submitted an update to this SIP every three years which reviewed the long-term strategy to ensure that the SIP was adequate for preventing impairment of visibility at Breton in agreement with Phase I EPA visibility regulations. Further, it was used to provide the public and EPA a comprehensive analysis of the progress toward the national visibility goal.

In agreement with Louisiana’s long-term strategy, a triennial review of emission inventories of stationary sources in parishes within 100-km distance of Breton was performed. The emission data was obtained from certified actuals reported by stationary sources to the LDEQ.

Data collected and analyzed was on pollutants chosen due to their effect on visibility. These pollutants were: total suspended particulates and PM₁₀, sulfur oxides, nitrogen oxides and volatile organic compounds. In the 2003 report, certified actuals were obtained from the Mississippi Department of Environmental Quality for those counties within the 100-km radius of Breton.

1.4 Class I Areas outside the State Boundaries

Section 51.308(d) directs each state to address regional haze not only for those Class I areas located within its political boundaries, but also those Class I areas that are located outside the political boundary which may be affected by emissions from within the State. The proximity of facilities in central and northern Louisiana could have a visibility impact on Caney Creek Wilderness Area in southwest Arkansas. CENRAP regional modeling has shown that, at the present time, these facilities bear little impact on the worst visibility days. (See TSD Section 5.4.3.1) However, Louisiana will continue to follow the protocol for permitting new construction and major modifications as is presented in our regulations as well as consultation with the appropriate federal agencies.